Spatial reference frame use in Isthmus Zapotec: a qualitative analysis of strategy variation

This study presents a qualitative analysis of how and when speakers conform to and diverge from previously observed preferences for absolute (geocentric) spatial reference frames; it discusses speakers’ use of “secondary strategies”, frames used less frequently overall and following dominant strategies within a spatial description task.

This presentation examines the use of spatial reference frames in speakers of Isthmus Zapotec, an Otomanguean language spoken in the Isthmus of Tehuantepec in Oaxaca, Mexico. Spatial reference frames are conceptual coordinate systems used to locate and orient entities in space. A growing body of research has shown a breadth of variation in reference frame use, where communities of speakers may show preferences for using axes projected from the landscape or celestial bodies (geocentric frames), from objects being described (intrinsic frames), or from the bodies of speakers (egocentric frames) (Majid et al 2004; Levinson & Wilkins (eds.) 2006; O’Meara & Pérez Báez (eds.) 2011). Speakers of Isthmus Zapotec have been shown to strongly prefer absolute (geocentric) frames anchored by cardinal directions and the locally strong prevailing winds (Pérez Báez 2011, *inter alia*), with some variation occurring in individuals with high rates of L2 Spanish use (ANON, ANON).

This analysis presents data from a new task designed to survey the strategies of larger portions of a community than previous studies have allowed. The referential communication task, realized as a matching game, uses configurations of four 3-dimensional toy animals as stimuli for the elicitation of spatial descriptions. Divided by a screen, one speaker directs their partner to place the animals in a matching configuration. The director’s descriptions are analyzed for reference frame use in locative and orientation descriptions. Each pair completed four trials of four animals. The task was conducted with 35-40 pairs of speakers in each of three communities of the Isthmus; the coded portion of the data from one community is presented here.

This study successfully captures the diversity of reference frame strategies used by speakers throughout one Isthmus community, while still supporting previous findings of a robust preference for geocentric frame types. Speakers used geocentric frames in 90% of orientation descriptions and 36% of locative descriptions. A majority of speakers begin their descriptions orienting each animal with respect to the prevailing north-south winds or with the rising or setting sun (1). They may also use perspective-free topological descriptions to locate an animal (30% of locative descriptions), as shown in (2).

1. *bi:wi wi7ini ka la nudxi7i* lu: me la:du: ri:nda!:ni ubi:dx
   
   ‘The pig is facing the east side’

2. *nu7u me gala!:wi7*
   
   ‘It’s in the middle’

Speakers then elaborate – sometimes at the prompting of an unsure partner, sometimes during a review stage where directors could correct their partner’s placement – using egocentric frames that are anchored by speakers’ bodies or intrinsic frames that are anchored by the other animals in the array (13% and 15% respectively of locative descriptions). This presentation discusses the nature of this variation in secondary strategies, which are far more frequent here than previous studies of speakers of this community have shown (Pérez Báez 2011).
References


